

Appln. No. 09/864,107
Amdt. dated August 30, 2004
Reply to Office Action dated July 7, 2004

IN THE CLAIMS:

Please amend claims 1 and 10 and add new claims 23 and 24 as follows. The following listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Currently Amended). A method for providing and processing a cursored user interaction with a spatially displayed medical image and producing graphics related data on said medical image, wherein said method comprises the steps of:

providing a menu-less graphical interface for displaying, essentially unobstructed, said medical image in a substantial portion of said graphical interface;

controlling a mouse computer interface device having at least one button;

displaying a pointer symbol on said graphical interface, wherein said pointer symbol represents a current position of said mouse on said graphical interface;

tracking a status of each of said at least one button;

detecting a position of said mouse, wherein said position detection step is activated upon actuation of one of said at least one button;

generating [[a]] one of a plurality of different
measurement ~~graphic~~ graphics related to a predefined set of
measurement operations on said medical image upon at least
one actuation of said at least one button; and

enabling the generation of the plurality of different
measurement graphics using only said mouse without
activation of ~~user-interface constructs~~ menus, toolbars and
control panels.

Claim 2 (Original). A method as claimed in Claim 1, wherein
a single-point actuating/positioning assigns an actual pixel
position and/or a pixel intensity quantity to the point in
question.

Claim 3 (Original). A method as claimed in Claim 1, wherein
a point pair actuating/positioning assigns a distance value to
the pair in question.

Claim 4 (Original). A method as claimed in Claim 1, wherein
a triple-point actuating/positioning assigns an angle value
quantity to a middle point of the triple.

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Claim 5 (Original). A method as claimed in Claim 1, wherein multiple-point actuating/positioning for an open or closed point sequence assigns an area value quantity to a concave region delimited by the sequence in question.

Claim 6 (Original). A method as claimed in Claim 1, wherein a freehand-drawn actuating/positioning for an open or closed curve assigns an area value quantity to a concave region delimited by said curve.

Claim 7 (Original). A method as claimed in Claim 1, wherein multiple-point actuating/positioning for an open or closed sequence assigns a poly-line measurement quantity to the sequence so drawn.

Claim 8 (Original). A method as claimed in Claim 1, wherein a freehand-drawn actuating/positioning for an open or closed sequence assigns a measurement quantity to the freehand sequence so drawn.

Claim 9 (Original). A method as claimed in any of Claims 2 to 8, and furthermore assigning a pixel staticizing to an assigned geometrical entity.

Claim 10 (Currently Amended). An apparatus arranged to provide and process a cursored user interaction with a spatially displayed medical image, wherein said apparatus comprises:

- a menu-less graphical interface for displaying, essentially unobstructed, said medical image in a substantial portion of said graphical interface;

- a pointing device having at least one button, wherein said pointing device is represented on said graphical interface by a standardized pointer symbol and wherein said pointer symbol represents a current position of said pointing device within the context of said graphical interface;

- a processor configured to detect an actuation of each of said at least one button of said pointing device and track positions of said pointing device; and

- a processor-internal list of measurement operations, said measurement operations being performed upon at least one actuation of the at least one button and producing corresponding, different measurement graphics on said medical image,

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said processor being arranged to produce the plurality of different measurement graphics based on said list of measurement operations using only said pointing device without activation of ~~user interface constructs~~ menus, toolbars and control panels.

Claim 11 (Previously Presented). An apparatus as claimed in Claim 10, further comprising assigning means for upon a single-point actuating/positioning assigning an actual pixel position and/or a pixel intensity quantity to the point in question.

Claim 12 (Previously Presented). An apparatus as claimed in Claim 10, further comprising assigning means for upon a point pair actuating/positioning assigning a distance value to the pair in question.

Claim 13 (Previously Presented). An apparatus as claimed in Claim 10, further comprising assigning means for upon a triple-point actuating/positioning assigning an angle value quantity to a middle point of the triple.

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Claim 14 (Previously Presented). An apparatus as claimed in Claim 10, further comprising assigning means for upon a multiple-point actuating/positioning for an open or closed point sequence assigning an area value quantity to a concave region delimited by the sequence in question.

Claim 15 (Previously Presented). An apparatus as claimed in Claim 10, further comprising assigning means for upon a freehand-drawn actuating/positioning for an open or closed curve assigning an area value quantity to a concave region delimited by said curve.

Claim 16 (Previously Presented). An apparatus as claimed in Claim 10, further comprising assigning means for upon a multiple-point actuating/positioning for an open or closed sequence assigning a poly-line measurement quantity to the sequence so drawn.

Claim 17 (Previously Presented). An apparatus as claimed in Claim 10, further comprising assigning means for upon a freehand-drawn actuating/positioning for an open or closed sequence

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assigning a measurement quantity to the freehand sequence so drawn.

Claim 18 (Previously Presented). An apparatus as claimed in any of Claims 11 to 17, further comprising staticizing means for assigning a pixel staticizing to an assigned geometrical entity.

Claim 19 (Previously Presented). A machine readable computer program, said program implementing a menu-less graphical interface and arranged for processing cursored user interaction with a spatially displayed medical image for producing graphics related data on such image, for implementing a method as claimed in Claim 1, said program being arranged for sensing mouse positionings and/or actuations and for effecting inherent measuring functionalities based on relative such positionings with respect to an associated imaged medical object, and for subsequently outputting representations of said measuring functionalities for displaying in association with said medical object.

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Claim 20 (Previously Presented). A method as claimed in claim 1, further comprising the step of enabling the generation of the measurement graphic based solely on actuation of said at least one button of said mouse when said pointer symbol is situated on said medical image.

Claim 21 (Previously Presented). A method as claimed in claim 1, further comprising the step of enabling the generation of the measurement graphic without requiring a user to define a type of graphic being generated.

Claim 22 (Previously Presented). A method as claimed in claim 1, wherein the measurement graphic is generated without movement of said pointer symbol associated with said mouse outside of said medical image.

Claim 23 (New). A method for providing and processing a cursored user interaction with a spatially displayed medical image and producing graphics related data on said medical image, wherein said method comprises the steps of:

providing a menu-less graphical interface for displaying, essentially unobstructed, said medical image in a substantial portion of said graphical interface;

controlling a mouse computer interface device having at least one button;

displaying a pointer symbol on said graphical interface, wherein said pointer symbol represents a current position of said mouse on said graphical interface;

tracking a status of each of said at least one button;

detecting a position of said mouse, wherein said position detection step is activated upon actuation of one of said at least one button;

generating one of a plurality of different measurement graphics related to a predefined set of measurement operations on said medical image upon at least one actuation of said at least one button; and

enabling the generation of all of the different measurement graphics only upon actuation of said at least one button of said mouse when said pointer symbol is situated on said medical image.

Claim 24 (New). A method for providing and processing a
cursored user interaction with a spatially displayed medical
image and producing graphics related data on said medical image,
wherein said method comprises the steps of:

providing a menu-less graphical interface for
displaying, essentially unobstructed, said medical image in
a substantial portion of said graphical interface;

controlling a mouse computer interface device having at
least one button;

displaying a pointer symbol on said graphical
interface, wherein said pointer symbol represents a current
position of said mouse on said graphical interface;

tracking a status of each of said at least one button;

detecting a position of said mouse, wherein said
position detection step is activated upon actuation of one
of said at least one button;

generating one of a plurality of different measurement
graphics related to a predefined set of measurement
operations on said medical image upon at least one actuation
of said at least one button; and

enabling the generation of all of the different
measurement graphics upon actuation of said at least one

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button of said mouse when said pointer symbol is situated on
said medical image and without movement of said pointer
symbol associated with said mouse outside of said medical
image.